IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Applicants: Bednorz et al.

Serial No.: 08/479,810

Filed: June 7, 1995

Date: Dec. 18, 2009

Docket: YO987074BZ

Group Art Unit: 1751

Examiner: M. Kopec

Appeal No. 2009-003320

For: NEW SUPERCONDUCTIVE COMPOUNDS HAVING HIGH TRANSITION TEMPERATURE, METHODS FOR THEIR USE AND PREPARATION

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SUPPLEMENT 2
REQUEST FOR REHEQRING
UNDER
37 C.F.R. § 41.52 (a)(1)
Of
Decision on Appeal dated 09/17/2009

Sir: Please consider the following.

Pursuant to 37 C.F.R. § 41.51 (a)(1) appellants request rehearing of the Decision on Appeal dated 09/17/2009 (Board's Decision).

The Request For Rehearing submitted on No. 19, 2009 shall be referred to herein as the Initial Request or the Initial Request for Rehearing. The Supplement submitted on 12/10/2009 shall re referred to as Supplement 1 or the Supplement 1 Request for Rehearing and this paper shall be referred to as Supplement 2 or the Supplement 2 Request fro Rehearing.

ARGUMENT

1 Section

Supplement 1 page 23, lines 16 -24, states:

> The Board's Decision has created a non-existent per se rule of lack of enablement from the *Genentech* decision that stands for the proposition that even if there are enabled species that come within the scope of a claim under examination, the claim is not enabled, if the claim includes within its scope species for which the specification does not explicitly describe starting materials and starting conditions, even if those undisclosed staring materials and starting conditions can be determined by routine experimentation by persons of ordinary skill in the art from what is known to them to make such other species. *Genentech* announced no such per se rule. This cannot be a correct statement of the law since it is well settled law that all species that come with in the scope of a claim do not have to be foreseen or known in advance for that claim to be enabled. The use and application of *Genentech* by the Board to create the Board's created per se rule to find the Subsection III claims not enabled is an error of law.

Supplement 1 page 44, lines 6 -14, states:

> Also As stated above the Board's Decision provides no legal authority for the statement that "a reasonable amount of direction or guidance in identifying the compositions in question as possessing high temperature superconductive characteristics" is necessary to satisfy the enablement requirement. There is no United States Federal Court decision that states that "a reasonable amount of direction or guidance in identifying" species that com within the scope of a claim in necessary to satisfy the enablement requirement of that claim to its full scope. As stated above it is well settled law that a patent applicant does not have to foresee in advance all species that come within the scope of a claim for the claim to be enabled to its full scope.

The Board' Decision in the sentence bridging page 21-22 states referring to *In re Wright:*

> For reasons detailed below, the art of high temperature superconductivity is generally unpredictable in that there is generally no reasonable expectation of successfully achieving high temperature superconductivity.

Appellants' Brief, Appellants' Replies, the Initial Request and Supplement 1 refer to the numerous decisions cited by Appellants' that support Appellants' assertion that it is well settled law that all species that come within the scope of their claims do not have to be foreseen by, predicted by or known in advance by Appellants or explicitly or implicitly described in their Specification for their Subsection III claims to be enabled under 35 USC 112 first paragraph.. The Boards' Decision which is to the contrary is in conflict with well settled law (in particular the 20 decisions in Section 2 below.) Thus if such species do not have to be foreseen or predicted by Appellants' Specification neither do the starting materials or starting conditions to make those species because foreseeing starting materials and/or starting conditions to make those species would be equivalent to foreseeing or predicting species which is well settled law is not required. Also, if such species do not have to be foreseen or predicted by Appellants' Specification neither does Appellants' Specification have to provide guidance in identifying such species because guidance in identifying such specie would be equivalent to foreseeing or predicting species which is well settled law is not required. The Board's Decision which requires Appellants' Specification to specifically describe starting materials and conditions for Subsection III claims outside of the scope of what the Board's Decision has found enabled is arrived at by quoting language from *Genentec* quoted out of context which as states in the Initial request at page 23, lines 15-18, "divorces the court's holding from the facts upon which it was rendered." Ricoh Co., Ltd. v. Quanta Computer Inc., 550 F.3d 1325, 1339 (Fed. Cir. 2008) As stated in the initial Request and Supplement 1 this is not what *Genentech* stands for. And, as stated above the Board's Decision cites no legal authority that states "a reasonable amount of direction or guidance in identifying" species that com within the scope of a claim in necessary to satisfy the enablement requirement of that claim to its full scope. It is uncontested that persons of skill in the art know how to make and test species that are with in the scope of the Subsection III claims, but which fall outside of what the Board's Decision considers enabled. Thus when the Boards' Decision states in regards to the Subsection III claims relying on *In re Wright* "that there is generally no reasonable expectation of successfully achieving

high temperature superconductivity" this implicitly requires that Appellants' Specification "foresee" or "predict" (i.e. manifest knowledge in advance) which species have the high temperature superconductivity property. This is in conflict with well settled law (in particular the 20 decisions in Section 2 below) that a patent applicant does not have to foresee all species that come within the scope of a claim under review to satisfy the enablement requirement. For these reasons the Board's Decision is an error or law.

Section

The following is a summary of some of these numerous decisions:

1. BV1paragraph bridging pages 124-125 cites *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 52 USPQ2d 1129 (Fed. Cir. 1999) which at 52 USPQ2d 1129, 1138 citing In re Vaeck 20 USPQ2d 1438 states:

> It is well settled that patent Applicants **are not required to disclose every species encompassed by their claims, even in an unpredictable art.** However, there must be sufficient disclosure, either through illustrative examples or terminology, to teach those of ordinary skill how to make and use the invention as broadly as it is claimed.
> (Emphasis added.)

2. BV1 paragraph bridging pages 94- 95, cites the unpublished Board decision of *Ex parte Chen*, 61 USPQ2d 1025 (Bd. App. 2000) which states in regards to a 1% sucess rate :

> the examiner offers no evidence which would reasonably support a conclusion that one skilled in this art would regard this rate of success … as evidencing undue experimentation. We remind the examiner that some experimentation may be required as long as it is not undue. *In re Vaeck 941* F.2d 488, 496, 20 USPQ2d 1438, 1445 (Fed. Cir. 1991). Appellants' disclosure explicitly describes the methodology to be used to arrive at the claimed transgenic carp. As the record now stands, the numbers emphasized by the examiner would reasonably appear to reflect the need for a repetitive procedure, rather than un-due experimentation by those wishing to practice the invention.

From this it is clear that 35 U.S.C. 112, first paragraph, does not require everything to be predicted in advance and permits the determination of the combinations that will and will not work by experimentation that is not undue.

3. BV1 page 51, lines 7-8 from bottom, cites the Board's precedential decision *Ex parte Jackson*, 217 USPQ 804 (Bd. App. 1982) which states at 217 USPQ 807 "a considerable amount of experimentation is permissible if it is merely routine."

4. BV1 page 48, lines 6-11, cite *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 219 USPQ 473 (Fed. Cir. 1983) which states

> **An applicant for patent is required to disclose the best mode then known to him for practicing his invention. 35 U.S.C. § 112. He is not required to predict all future developments which enable the practice of his invention in substantially the same way.** Hughes Aircraft Co. v. United States, 717 F.2d 1351, 1362 (Fed. Cir. 1983);39 USPQ2d 1065.
> (Emphasis added.)

5. BV1 page 92, lines 8-13, cites *In re Angstadt*, 537 F.2d 498, 190 USPQ 214 (CCPA 1976) which states

> having decided that **appellants are *not* required to disclose every *species* encompassed by the claims even in an unpredictable art** such as the present record presents, each case must be determined on its own facts. 190 USPQ 214, 218.
> (Emphasis added).

6. RB page 29, lines 12-25, cites *In re Bowen*, 492 F.2d 859, 181 USPQ 51 (CCPA 1974) which states:

> Accordingly, there appears to be no basis for the non-enablement rejection on the theory that claims read on undisclosed polymers. While the claims literally comprehend numerous polymers in addition to the one specifically described in appellant's specification, nylon 66, no persuasive reason has been given by the Patent Office why the specification does not realistically enable one skilled in the art to practice the invention as broadly as it is claimed.
>
> In re Bowen, 492 F.2d 859, 863 (C.C.P.A. 1974), 492 F.2d 859; 1974 CCPA LEXIS 191; 181 U.S.P.Q. (BNA) 51-52

From this passage it is clear that he CCPA found that in In re Bowen **one** example, nylon 66, was sufficient to enable a claim directed to the **genus,** a "polymer," which includes many species not disclosed in the Bowen specification.

7. BV1 page 128 lines 6-9 citing *In re Certain Limited-Charge Cell Culture Microcarriers*, 221 USPQ 1165 (Int'l Trade Comm'n 1983) states:

> The fact that experimentation may be complex does not necessarily make it undue, if the art typically engages in such experimentation. In re Certain Limited-Charge Cell Culture Microcarriers, 221 USPQ 1165, 1174 (Int'l Trade Comm'n 1983),

8. BV1 page 110 lines 8-13, cites *In re Cook*, 439 F.2d 730, 169 USPQ 298 (CCPA 1971) states
   The CCPA in In re Cook 169 USPQ 298, 302 states:

> We agree that appellants' claims are not too broad "to the point of invalidity" just because they read on even a very large number of inoperative embodiments, since it seems to be conceded that a person skilled in the relevant art could determine which conceived but not-yet-fabricated embodiments would be inoperative with expenditure of no more effort than is normally required of a lens designer checking out a proposed set of parameters.

9. BV1 page 233, lines 10-14, citing *In re Corr*, 347 F.2d 578, 146 USPQ 69 (CCPA 1965) states:

> The CCPA also cite Minerals Separation, Ltd. v. Hyde, 242 U.S. 261 in In re Corr, 52 C.C.P.A. 1505, 1508 (C.C.P.A. 1965) 146 U.S.P.Q. (BNA) 69 and states "The certainty required in patents is not greater than that which is reasonable, having regard to the subject matter involved. Minerals Separation, Ltd. v. Hyde, 242 U.S. 261." In re Hudson, 40 C.C.P.A. 1036, 1040 (C.C.P.A. 1953)

10. BV1 page 225, line 2 from the bottom to page 226, line 5, citing *In re Fisher*, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) states:

> Applicants discovered that ceramic materials are superconductors. Their work lead others to look for other species. Applicants` evidence shows that those others used Applicants teaching to determine those species. Thus following In re Fisher "It is apparent that such an inventor should be allowed to dominate the future

patentable inventions of others where those inventions were based in some way on his teachings." (166 USPQ 18, 24)
In re Fisher, 427 F.2d 833, 166 USPQ 18 (CCPA 1970)

11. RB page 32, line 6 to line 2 from the bottom, cities *In re Fuetterer*, 319 F.2d 259, 138 USPQ 217 (CCPA 1963) which states:

> We find the arguments of the board and the examiner relating to experimentation necessary to determine the suitability of undisclosed salts to operate in appellant's claimed combination beside the point. Appellant's invention is the combination claimed and not the discovery that certain inorganic salts have colloid suspending properties. We see nothing in patent law which requires appellant to discover which of all those salts have such properties and which will function properly in his combination. The invention description clearly indicates that any inorganic salt which has such properties is usable in his combination. If others in the future discover what inorganic salts additional to those enumerated do have such properties, it is clear appellant will have no control over them per se, and equally clear his claims should not be so restricted that they can be avoided merely by using some inorganic salt not named by appellant in his disclosure. **The only "undue burden" which is apparent to us in the instant case is that which the Patent Office has attempted to place on the appellant**. The Patent Office would require him to do research on the "literally thousands" of inorganic salts and determine which of these are suitable for incorporation into his claimed combination, apparently forgetting that he has not invented, and is not claiming, colloid suspending agents but tire tread stock composed of a combination of rubber and other ingredients.
>
> We are not persuaded that our conclusion on this point is wrong by decisions of this and other courts relating to the sufficiency of invention disclosures in cases wherein the applicant is claiming chemical compounds per se.
> (Emphasis added.)
>
> In re Fuetterer, 50 C.C.P.A. 1453, 1462 (C.C.P.A. 1963)
> 138 U.S.P.Q. (BNA) 217

12. BV page 99, lines 8-11 from the bottom cites , *In re Geerdes*, 491 F.2d 1260, 180 USPQ 789 (CCPA 1974) stating:

> The Court in In re Geerdes further states at 180 USPQ 993 "The Board expressed concern that 'experimentation' is involved in the selection of proportions and particle sizes, but this is not

determinative of the question of scope of enablement. It is only undue experimentation that is fatal."

13. RB page 34, line 1 -16, citing *In re Goffe*, 542 F.2d 564, 191 USPQ 429 (CCPA 1976) states

> The CCPA in In re Goffe, citing In re Fuetterer states in reversing a rejection for lack of [sic] enablement ...:
>
> > For all practical purposes, the board would limit appellant to claims involving the specific materials disclosed in the examples, so that a competitor seeking to avoid infringing the claims would merely have to follow the disclosure in the subsequently-issued patent to find a substitute. However, to provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts. See In re Fuetterer, 50 CCPA 1453, 1462, 319 F.2d 259, 265, 138 USPQ 217, 223 (1963).
>
> In re Goffe, 542 F.2d 564, 567 (C.C.P.A. 1976)
> 191 U.S.P.Q. (BNA) 429

14. Paragraph bridging pages 143-144 BV1 cites *In re Knowlton*, 500 F.2d 566, 183 USPQ 33 (CCPA 1974) stating:

> The dissent in In re Knowlton states:
>
> > The protection granted, if appellant's claims are allowed, gives him the right to exclude others from making, using, or selling the invention. 35 USC 154. No right is granted which includes the right to use. Thus, a subsequent inventor of a new and unobvious method of scrambling may obtain a patent which, by the terms of its grant, is subservient to appellant's patent. However, the subsequent inventor would have the right to exclude appellant from making, using, or selling the later invention. For that reason, broad protection may be granted here without requiring disclosure of every embodiment within the scope of the claims. (Emphasis added) In re Knowlton, 500 F.2d 566, 573 (C.C.P.A. 1974)
>
> Thus a genus claims is enabled when there are undisclosed species that are later discovered and separately patentable.

15. BV1 page 48, lines 11-22 cites *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 60 USPQ2d 1851 (Fed. Cir. 2001) which states:

> **Enablement does not require the inventor to foresee every means of implementing an invention at pains of losing his patent franchise.** Were it otherwise, claimed inventions would not include improved modes of practicing those inventions. Such narrow patent rights would rapidly become worthless as new modes of practicing the invention developed, and the inventor would lose the benefit of the patent bargain. Invitrogen Corp. v. Clontech Labs., Inc., 429 F.3d 1052, 1071 (Fed. Cir. 2005)" And, "**Our case law is clear that an applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention.**" Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1344, 60 U.S.P.Q.2D (BNA) 1851 (Fed. Cir. 2001)

16. Supplement 1 page 8, lines 17-29, citing *In re Wands*, 858 F.2d 731, 736; 8 USPQ2d 1400 (Fed. Cir. 1988) states

> Thus *In re Wands* permits an undisclosed species to be found enabled if it "can be obtained from readily available sources or derived from readily available starting materials through routine screening that does not require undue experimentation." There is no requirement in *In re Wands* for the "sources or ... starting materials" to be described in the Specification corresponding to the claims on appeal, it is only required that there be "readily available" and that what is claimed be "be obtained from readily available sources or derived from readily available starting materials **through routine screening that does not require undue experimentation**." In the present application on appeal there is no evidence that species (including Subsetion III superconductors) within the scope of the claims for which the Board's Decision has not revered the Examiners' rejections cannot be "be obtained from readily available sources or derived from readily available starting materials through routine screening that does not require undue experimentation."

17. BV1 paragraph bridging pages 228-229 citing *Minerals Separation, Ltd. v. Hyde*, 242 US 261 (1916) states :

> Minerals Separation, Ltd. v. Hyde, 242 U.S. 261, 270-71 (1916), in discussing the adequacy of the disclosure of the froth flotation process of ore separation:

> Equally untenable is the claim that the patent is invalid for the reason that the evidence shows that when different ores are treated preliminary tests must be made to determine the amount of oil and the extent of agitation necessary in order to obtain the best results. Such variation of treatment must be within the scope of the claims, and the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter. The composition of ores varies infinitely, each one presenting its special problem, and it is obviously impossible to specify in a patent the precise treatment which would be most successful and economical in each case. The process is one for dealing with a large class of substances and the range of treatment within the terms of the claims, while leaving something to the skill of persons applying the invention, is clearly sufficiently definite to guide those skilled in the art to its successful application, as the evidence abundantly shows. This satisfies the law. Mowry v. Whitney, 14 Wall. 620; Ives v. Hamilton, 92 U.S. 426, and Carnegie Steel Co. v. Cambria Iron Co., 185 U.S. 403, 436, 437

18. BV1 paragraph bridging pages 47-48, citing *Sri Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 227 USPQ 577 (Fed. Cir. 1985) states:

> The CAFC has stated in Sri Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121 (Fed. Cir. 1985); 227 USPQ 577, 586 that this is not necessary:
>
> **The law does not require the impossible. Hence, it does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention.** The law recognizes that patent specifications are written for those skilled in the art, and requires only that the inventor describe the "best mode" known at the time to him of making and using the invention. 35 U.S.C. § 112.
>
> (Emphasis added.)

19. BV1 page 233, lines15-29 citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983) states:

> The CAFC adopted the Supreme Court Minerals v. Hyde Enablement Statement in W.L. Gore & Associates, Inc. v. Garlock, Inc., stating:

> The district court invalidated both patents for indefiniteness because of its view that some "trial and error" would be needed to determine the "lower limits" of stretch rate above 10% per second at various temperatures above 35 degrees C. That was error. **Assuming some experimentation were needed, a patent is not invalid because of a need for experimentation. Minerals Separation, Ltd. v. Hyde, 242 U.S. 261, 270-71, 61 L. Ed. 286, 37 S. Ct. 82 (1916). A patent is invalid only when those skilled in the art are required to engage in undue experimentation to practice the invention. In re Angstadt, 537 F.2d 498, 503-04, 190 USPQ 214, 218 (CCPA 1976).** There was no evidence and the court made no finding that undue experimentation was required.
> W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1557 (Fed. Cir. 1983)220 U.S.P.Q. (BNA) 303 (1983) (Emphasis added.)

20. BV1 page 102, lines 11-17 cites *In re Angstadt*, 537 F.2d 498 (BV1 page 102, lines 11-17) which cites Fields v. Conover which states:

> a disclosure complies with the how-to-make requirement of 35 USC 112 even though "some experimentation, provided it is not an undue amount" (and provided that it does not require ingenuity beyond that to be expected of one of ordinary skill in the art), is still required to adapt the invention to particular settings.
> Fields v. Conover, 58 C.C.P.A. 1366, 1372 (C.C.P.A. 1971)

None of these 20 decisions require that the starting materials and starting conditions for all species that come within the scope of the claims under review be described in the specification corresponding to those claims as required by the per se rule of the Board's Decision. The 120 decisions cited above can be summarized by these selected excerpts from these decisions. "Applicants are not required to disclose every species encompassed by their claims, even in an unpredictable art." *Enzo Biochem* "An applicant for patent is required to disclose the best mode then known to him for practicing his invention. 35 U.S.C. § 112. He is not required to predict all future developments which enable the practice of his invention in substantially the same way. *Hughes Aircraft Co.* "[A]ppellants are not required to disclose every species encompassed by the claims even in an unpredictable art." *In re Angstadt* "Enablement does not require the inventor to foresee every means of implementing an invention at pains of losing his patent franchise.

...Our case law is clear that an applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention." *Rexnord* "The law does not require the impossible. Hence, it does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention." *Sri Int'l* "Assuming some experimentation were needed, a patent is not invalid because of a need for experimentation. Minerals Separation, Ltd. v. Hyde, 242 U.S. 261, 270-71, 61 L. Ed. 286, 37 S. Ct. 82 (1916). A patent is invalid only when those skilled in the art are required to engage in undue experimentation to practice the invention. In re Angstadt, 537 F.2d 498, 503-04, 190 USPQ 214, 218 (CCPA 1976)." *W.L. Gore* Experimentation is "not an undue amount" when "it does not require ingenuity beyond that to be expected of one of ordinary skill in the art." *Fields* Where "[t]he process is one for dealing with a large class of substances ["varies infinitely"]and the range of treatment within the terms of the claims, while leaving something to the skill of persons applying the invention, is clearly sufficiently definite to guide those skilled in the art to its successful application as the evidence abundantly shows"(*Minerals*) enablement is satisfied.

The Board's Decision makes no attempt to reconcile the inconsistency between its per se rule and the holding of these 20 decisions. These 20 decisions as applied in Appellant's Brief, Appellants' Replies, the Initial Request, Supplement 1 and this Supplement 2 support Appellants' position that the Subsection III claims are enabled and do not support the Board's Decision that the Subsection III claims are not enabled.

3 Section

BV1, page 105, lines 12-17 cites *In re Colianni*, 561 F.2d 220, 195 USPQ 150 (CCPA 1977) stating:

> The Examiner cited In re Colianni 195 USPQ 150 which Applicants believe is not on point since in In re Colianni "[t]here is not a single specific example or embodiment by way of an illustration of how the claimed method is to be practiced." (195 USPQ 150, 152). In contradistinction as noted above, there are numerous examples cited in Applicants' specification and incorporated references. Thus this decision is not on point.

In re Wands cites *In re Colianni* for the proposition "However, experimentation needed to practice the invention must not be undue experimentation. In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988) (See *Wands* footnote 20.)

As stated above and in Supplement 1 *In re Wands* expressly permits reliance on what is readily available (known) to persons of skill in the art and not explicitly described in the specification to determine other species that come within the scope of the claim but which are not explicitly described. *Genentech* cites *In re Wands (*as described in Supplement 1 page 22 last full paragraph). Consequently *Genentech* cannot have announced the per se rule applied by the Board's Decision using *Genentech* to find Appellants' Subsection III claim not enabled. *Genentech* decided 20 years later is just another version of *Colianni*. In *Genentech* there was not one embodied example. See the discussion in Supplement 1 at page 20, lines 13-23, which states:

> In this quoted language the CAFC is referring to the "novel aspect" which in the CAFC made clear in regards to the *Genentech* claim is "cleavable fusion expression of hGH.." The CAFC is stating when no example is provided of how to achieve "cleavable fusion expression of hGH." undue experimentation is required if as later discussed in *Genentech* the experimentation to determine how to achieve "cleavable fusion expression of hGH" is not only routine experimentation. In the passage quoted above the CAFC states "when there is no disclosure of any specific starting material or of any of the conditions under which **a** process can be carried out, undue experimentation is required" (Emphasis added.) By the use of the words "**a** process" it is clear indication that the CAFC is referring here to the fact that the *Genentech* specification provided no example of how to practice "cleavable fusion expression of hGH."

The Board's Decision page 14, lines 2-16, quotes the following from *Genentech*

> [A]rguments, focused almost exclusively on the level of skill in the art, ignore the essence of the enablement requirement. Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. *See Brenner v. Manson*, 383 U.S. 519, [535-]36, 86 S. Ct. 1033, 1042-43, 16 L.Ed 2d 69,

> 148 USPQ 689, 696 (1966) (stating, in context of the utility requirement, that "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."). Tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the Specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention.
>
> *Genentech, Inc. v. Novo NordiskA/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997).

Appellants state at BV1 page 108, line 15 to page 109, line 10:

> At page 7 of the Office Action of 07/28/2004 in footnote 5 the Examiner cited Brenner v. Manson 148 USPQ 689 for the statement "a patent is not a hunting license. It is not a reward for the search, but a reward for its successful conclusion." The claim in question was in Brenner v. Manson a method of making a composition. The composition had no known use. To issue a patent for such a process would be granting a hunting license for a utility that may occur in the future. The method was found to lack utility under 35 USC 101 and thus was found not be patentable subject matter.
>
> ...
>
> Even if it were appropriate to apply this quote from the Brenner decision, it would only apply if undue experimentation were necessary to fabricate samples, not specifically fabricated by Applicants, that come within the scope of Applicants' claim. As clearly shown by Applicants, undue experimentation is not needed to practice the inventions of Applicants' rejected claims. All further developments were based on Applicants' teaching. Applicant's have taught "how to make and use" species within the scope of their claims. This is all that is necessary for enablement. The Brenner v. Manson statement may be applicable in the situation of enablement when an applicant seeks a claim for which it is not known "how to make and use" the invention. Under such a circumstance the applicant would be waiting with an issued patent as a "hunting license" for someone to discover "how to make and use" the invention. This is not the situation in the present application since Applicants have taught "how to make and use" their claimed invention.

Thus the way Appellants have shown the relevance of *Brenner v. Manson* to enablement and how it supports Appellants' position that their claims, including the Subsection III claims, are enabled is the same way that the CAFC has applied it to enablement in *Genentech.* Thus *Brenner v. Manson* supports the enablement of Appellants' Subsection III claims and does not support the Board's Decision that these claims are not enabled

Appellants note that to satisfy the enablement requirement to the full scope of a claim, a patent applicant does not have to be in possession of a first principles theory explaining the principles underlying the invention. This is well settled law as stated by In re Isaacs, 347 F.2d 889, 146 USPQ 193 (CCPA 1963) at BV1 170 and *Newman v. Quigg*, 877 F.2d 1575, 11 USPQ2D 1340 (Fed. Cir. 1989) at BV1 170. Thus the Boards apparent reliance on the statement from the Schuller Article "[t]hus far, the existence of a totally new superconductor has proven impossible to predict from first principles" to find the Subsection III claims not enabled is an error of law. As noted above "[a]n applicant for patent is required to disclose the best mode then known to him for practicing his invention. 35 U.S.C. § 112. He is not required to predict all future developments which enable the practice of his invention in substantially the same way." *Hughes Aircraft Co.* Thus a first principles theory to predict all future developments in the high temperature superconductor art is not required and the lack of one, if this for the sake of argument is assumed to be true, does not mean Appellants' Subsection III claims are not enabled. As described in detail in the first Affidavit of Newns (Brief Attachment AP) even if a first principles theory for high temperature superconductivity existed at the time of Appellants first filing date, that would not have permitted a person of ordinary skill in the art to "foresee" or "predict" other species without doing a "theoretical experiment," as that term is described in the first News Affidavit which is equivalent of doing a physical experiment as described in the first News Affidavit (Brief Attachment AP paragraphs 7, 8, 9 and 18). Thus the ability to determine other species by routine experimentation and testing is equivalent to having a first principles theory (See the first Affidavit of Newns.) This is essentially the reason for the result in *Minerals Separation v. Hyde* and *In re Cook*. And infinite amount of routine experimentation stated in *Minerals Separation v. Hyde* and an equivalent unlimited amount of routine calculation as stated in *In re Cook* is not fatal to enablement. As stated by Appellants "predictability" in the patent law means determinability without ingenuity beyond that of a person of ordinary skill in the art. Experimentation is undue when it involves ingenuity beyond that of a person or ordinary skill in the art but is not undue if it involves an infinite amount or routine experimentation. That is what the United States Supreme Court stated in *Minerals*

Separation v. Hyde. Since it is well settled law that all species that come within the scope of a claim do not have to be foreseen or predicted by an Appellants' Specification to satisfy e the enablement requirement, this means that reasonable expectation of success cannot mean knowing those species in advance or knowing the starting materials and starting conditions in advance to make those species. It is only necessary that how to make and test those species be readily available to persons of skill in the art once there are explicitly described working embodiments in Appellants' Specification and the other species are determinable by routine experimentation as is the case with regards to Appellants' Subsection III claims. The requirement of the Boards' Decisions that the starting materials and starting conditions be described in Appellants' Specification for superconductive species that come within the scope of the Subsection III claims but outside of what the Board's Decision has indicated is enabled is contrary to the 20 decisions quoted above, in particular it is contrary to the United States Supreme Court decision in *Minerals Separation v. Hyde*. Enablement means to empower a person of ordinary skill in the art to practice a claim to its full scope, which Appellants have done in regards to the Subsection III claims, in particular those reciting that the superconductor can be made by known principles of ceramic science and/or directed to ceramic like materials. Enablement does not mean describing in the Specification all of those species as the 20 decisions cited above state. The Board's Decision if applied to these 20 decisions would find that these 20 decisions were decided in error including the United States Supreme Court decision in *Minerals Separation v. Hyde*.. Thus the Board's Decision finding the Subsection III claims not enabled is an error of law.

5 **Section**

As stated in Section 5 of Supplement 1 submitted herewith are a copy of:

- *In re Cook*, Attachment AP
- US3736048 Attachment AQ
- the file history of US3736048. Attachment AR

6 **Section**

The Initial Request page 4 referring to the announcement of Appellants award of the 1987 Nobel Prize states:

> This states that the 1987 Nobel Prize was awarded to Appellants "for their important break-through in the discovery of superconductivity in ceramic materials." The Board's Decision does not find enabled a claim commensurate in scope with the contribution for which they were awarded the Nobel Prize.

The Boards' Decision at page 35 lines 5-9 from the bottom states

> *Plant Genetic Sys. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1340 (Fed. Cir. 2003). Further, the *Plant Genetic* decision affirms that pioneering inventions (e.g., Appellants' Nobel prize winning discovery of high temperature superconductors) are not entitled to a lower standard of enablement. *Id.* at 1341-42.

Appellants have never argued that they are entitle to a lower standard of enablement became they won a Nobel Price or because they asserted that their invention was a pioneering invention.. In this type of context Appellants have only relied on the Boards' precedential decision *Ex parte Jackson.* BV1 page 97 first paragraph states:

> The Board in Ex parte Jackson further states at 217 USPQ 808 "The problem of enablement of processes carried out by microorganisms were uniquely different from the field of chemistry generally. Thus, we are convinced that such recent cases as In re Angstadt 537 F.2d 498, 190 USPQ 214 (CCPA 1976) and In re Geerdes 491 F.2d 1260, 180 USPQ 789 (CCPA 1974) are in apposite to this case." Therefore, since the present application is not directed to biotechnology or microorganism invention, the decision of Ex parte Jackson does not apply, but In re Angstadt and In re Geerdes do apply.

The Board's Decision is almost exclusively based on three biotechnology decisions *Genentech, In re Wright* and *In re Wands*, and substantially ignores *In re Angstadt* and *In re Geerdes.* As noted above it is Appellants position that the Board's Decision has applied these decisions incorrectly resulting in errors of law. As noted above *In re Angstadt* explicitly quotes from and relies on the United States Supreme Court decision *Minerals Separation v. Hyde.* Although Appellants' Brief and Appellants Replies

explicitly and extensively relies on this United States Supreme Court decision and decisions applying it, such as *In re Angstadt*, the Board's Decision has not commented on this analysis, but has ignored it. Appellants have supported their view by extensive quotations from the legal authority that they have relied on. The Board's Decision has essentially made no comment on this, but has ignored it . The facts of the Subsection III claims are almost identical to those of *Minerals Separation v. Hyde.* It is Appellants' position that under the holding of *Minerals Separation v. Hyde* the Subsection III claims are enabled, in particular for those claims reciting that the superconductive element can be made by know principles of ceramic science and/or being a ceramic, ceramic like material of having a ceramic characteristic as identified in the Initial Request for Rehearing.

7 **Section**

CONCLUSION

For the reasons given in the Initial Request for Rehearing, Supplement 1 and this Supplement 2 Appellants request the Boart to reverse the rejection of the Subsection III claims found not enabled in the Final Action and for which the Board's Decisions did not reverse the Examiner's rejections, in particular for those claims reciting that the superconductive element can be made by know principles of ceramic science and/or being a ceramic, ceramic like material of having a ceramic characteristic as identified in the Initial Request for Rehearing.

Please charge any fee necessary to enter this paper and any previous paper to deposit account 09-0468.

Respectfully submitted,

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